

EXPLANATION OF SIGNIFICANT DIFFERENCES

SECOR International, Inc. has proposed implementation of *in-situ* chemical oxidation, using potassium permanganate (KMNO_4), at the Former Watkins-Johnson Facility Site. KMNO_4 is a strong oxidant that reacts well with trichloroethylene (TCE) and its breakdown products. KMNO_4 will be injected into the groundwater utilizing existing wells (PA-40, PA-43, PA-56, PA-30, PA-57, PA-61R, PA-26R and PA-55R) and temporary Geoprobe borings in the Building 5 and 6 areas. Groundwater pumping from the all extraction wells in the Building 5 and 6 areas will be stopped. The KMNO_4 would destroy the VOCs in situ.

The Work Plan for this work is contained in the *Revised Workplan for In-Situ Chemical Oxidation at Building 5 and 6, Former Watkins-Johnson Facility* prepared by SECOR International, Inc. and dated January 11, 2006.

DTSC has determined that this would be a significant, but not fundamental, change to the final remedy outlined in the Remedial Action Plan approved by DTSC for this Site in 1994. Therefore, an Explanation of Significant Differences has been prepared and will undergo public review.

BACKGROUND

The Watkins-Johnson facility was developed in 1958 for the design, development and manufacture of advanced electronic systems, electronic devices and related equipment for military, industrial and space applications. An underground gasoline storage tank and an underground acid neutralization basin existed at the Site, and were removed in 1985 and 1987, respectively. Investigations of these two areas revealed that contaminated groundwater had migrated beneath the Site from upgradient sources and led to the discovery of the regional groundwater plume.

Soil and groundwater investigations were conducted at the Site between 1991 and 1993. The investigations confirmed the presence of volatile organic compounds (VOCs) in shallow soil and groundwater beneath the Site. However, it was determined that the impact from on-site releases on groundwater could not precisely be determined due to VOCs migrating onto the Site from upgradient sources. The Site is divided into two operable units, OU1 and OU2 (Building 5 and 6 areas). Groundwater contamination in the OU1 area was determined to commingle with that of the regional plume, and was therefore addressed as part of the Hillview-Porter Regional group.

DTSC approved a final remedy for the Site in 1994 in the Final Remedial Action Plan. The final remedy included:

1. Groundwater pumping and treatment in OU1 and OU2 until groundwater meets State drinking water standards.

Recent pilot studies conducted at the Hewlett-Packard Company Building 15 Site and at the Teledyne MEC Site show that VOCs in groundwater can be destroyed in place using a substance called potassium permanganate (KMNO_4). KMNO_4 is a chemical that is frequently used for wastewater treatment. Treatment with KMNO_4 destroys the VOCs in place instead of pumping groundwater and then removing the VOCs aboveground. Activities discussed in this ESD will only occur in the Building 5 and 6 (OU2) areas.